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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,999	03/08/2001	Sung Bae Jun	P. 194	6665
34610	7590	12/08/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			BONSHOCK, DENNIS G	
			ART UNIT	PAPER NUMBER
			2173	

DATE MAILED: 12/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	Application No. 09/800,999	Applicant(s) JUN ET AL.	
	Examiner Dennis G. Bonshock	Art Unit 2173	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 18-41 and 45-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 18-41 and 45-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4-21-05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **FINAL REJECTION**

### ***Response to Amendment***

1. It is hereby acknowledged that the following papers have been received and placed on record in the file: Amendment as received on 9-14-2005.

2. Claims 1-47, have been examined.

Status of claims:

3. Claims 1-4, 18-41, and 45-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Bruckhaus, Patent #6,052,492.

4. Claims 5-17 and 42-44 have been canceled by the applicant.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 18-41, and 45-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Bruckhaus, Patent #6,052,492.

7. With regard to claim 1, which teaches a method of generating a synthetic key frame comprising: receiving a video stream from a first source and dividing it into a plurality of sections, each section including a plurality of frames, Bruckhaus teaches, in

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column 1, lines 55-63 and in column 4, lines 12-25, a system that automatically generates a representative image to represent a video sequence of a video program, the system further dividing a video into sequences, from which it extracts units (representative images). With regard to claim 1, further teaching selecting a key region from each of the plurality of sections, Bruckhaus teaches, in column 4, lines 35-65 and in column 5, lines 31-45, a unit extractor that selects portions of frames representative of the section. With regard to claim 1, further teaching combining the selected key region from each of the plurality of sections to form a synthetic key frame that includes each selected key region within the synthetic key frame, Bruckhaus teaches, in column 6, lines 37-48, generating a representative image of the entire video that shows a representative image from each of the sections of the video. With regard to claim 1, further teaching each selected key region corresponding to a portion of a frame smaller than the total frame size, Bruckhaus teaches, in column 4, lines 35-65, a unit extractor that selects portions of frames representative of the section, where the selected unit is an element in a frame.

8. With regard to claim 2, which teaches the dividing step including receiving video from a second source, Bruckhaus lists a plurality of source of video content (ex: internal storage, external storage, network connection, etc.) (see column 3, lines 33-67).

9. With regard to claim 3, which teaches the selecting step of including a key region output from a second source, Bruckhaus lists a plurality of source of video content (ex: internal storage, external storage, network connection, etc.) (see column 3, lines 33-67).

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Bruckhaus teaches, in column 4, lines 35-65 and in column 5, lines 31-45, a unit extractor that selects portions of frames representative of the section.

10. With regard to claim 4, which teaches that a section is a unit of a segment, Bruckhaus teaches, in column 1, lines 55-63, in column 4, lines 12-25, and column 6, lines 9-27, the system automatically dividing a video into sequences, which can be further divided into sub-sequences, from which it extracts units.

11. With regard to claim 18, which teaches a hierarchical video summary method comprising means of, dividing a video stream into a plurality of sections where each section includes a plurality of frames, Bruckhaus teaches, in column 1, lines 55-63 and in column 4, lines 12-25, a system that automatically generates a representative image to represent a video sequence of a video program, the system further dividing a video into sequences, from which it extracts units (representative images). With regard to claim 18, further teaching synthesizing a key region of each section into one image, to generate a synthetic key frame that includes each of the synthesized key regions from each section, wherein each key region corresponds to a portion of a frame smaller than the total frame size, Bruckhaus teaches, in column 4, lines 35-65, a unit extractor that selects portions of frames representative of the section, where the selected unit is a element in a frame. Bruckhaus further teaches, in column 6, lines 37-48, generating a representative image of the entire video that shows a representative image from each of the sections of the video. With regard to claim 18, further teaching assigning the synthetic key frames to a key image locator, a hierarchical summary list for describing

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lower summary structures, and structural information, Bruckhaus further teaches, in column 6, lines 9-60, and a hierarchical summary of the video content allowing a user to peruse through images.

12. With regard to claim 19, which teaches a key image locator being a structure for designating an image using: a key image locator, a key frame locator, and a s-key frame locator, Bruckhaus further teaches, in column 6, lines 9-60, the representative image viewer enabling a user to view key images from any level of the hierarchy.

13. With regard to claim 20, which teaches that each hierarchical summary structure is represented by an image representative of a specific segment, Bruckhaus further teaches, in column 6, lines 9-60, the hierarchical summary of the video content allowing a user to peruse through images similar to the way a user would access software container, windows, folders, etc.

14. With regard to claim 21, which teaches that each component of the lower hierarchical summary list uses a hierarchical/recursive summary structure as a lower hierarchical summary structure, Bruckhaus further teaches, in column 6, lines 9-60, the hierarchical summary structure having layer imbedded in layers containing overlapping content from the parent layer.

15. With regard to claim 22, which teaches that the hierarchical summary structure has summary level information, Bruckhaus further teaches, in column 6, lines 9-60, the hierarchical summary structure providing the summary in a tree structure with associated predominance (an associated factor) information.

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16. With regard to claim 23, which teaches the hierarchical summary structure including a fidelity value, Bruckhaus further teaches, in column 6, lines 9-60 and column 5, lines 15-30, the hierarchical summary structure providing the summary in a tree structure with associated predominance (an associated factor) information.

17. With regard to claim 24, which teaches a method for providing a video browsing interface comprising: dividing a video stream into a plurality of sections, Bruckhaus teaches, in column 1, lines 55-63 and in column 4, lines 12-25, a system that automatically generates a representative image to represent a video sequence of a video program, the system further dividing a video into sequences, from which it extracts units (representative images). With regard to claim 24, further teaching synthesizing a key region representing content of each section into one image, Bruckhaus teaches, in column 4, lines 35-65 and in column 5, lines 31-45, a unit extractor that selects portions of frames representative of the section. With regard to claim 24, further teaching generating a synthetic key frame that includes each of the synthesized key regions from each section, wherein each key region represents important information regarding the respective frame, Bruckhaus teaches, in column 6, lines 37-48, generating a representative image of the entire video that shows a representative image from each of the sections of the video. Bruckhaus further teaches, in column 4, lines 35-65, a unit extractor that selects portions of frames representative of the section, where the selected unit is an element in a frame. With regard to claim 24, further teaching providing a user interface to a predetermined display to browse a

video related to the generated synthetic key frame, Bruckhaus teaches, in column 6, lines 37-60, a user interface that allows the user to browse the video content by representative frames.

18. With regard to claim 25, which teaches the user interface providing the synthetic key frame in the form of view, Bruckhaus teaches, in column 6, lines 37-60, a user interface presenting the representative images for view.

19. With regard to claim 26, which teaches key frames being arranged in a time sequence, and the key frames arranged in a tree shape, Bruckhaus teaches, in column 6, lines 37-60, a user interface presenting the representative images in sequential order and also in a tree structure.

20. With regard to claim 27, which teaches key frames assigned to each node in a TOC form, Bruckhaus teaches, in column 6, lines 9-60, a user interface presenting the representative images in a hierarchical tree structure, and an embodiment where sub-images can be accessed through the parent (similar to TOC).

21. With regard to claim 28, which teaches dividing video into a plurality of sections where each section includes a plurality of frames, Bruckhaus teaches, in column 1, lines 55-63 and in column 4, lines 12-25, a system that automatically generates a representative image to represent a video sequence of a video program, the system further dividing a video into sequences, from which it extracts units (representative images). With regard to claim 28, further teaching synthesizing a key region representing content of each section into one image, Bruckhaus teaches, in column 4,



lines 35-65 and in column 5, lines 31-45, a unit extractor that selects portions of frames representative of the section. With regard to claim 28, further teaching generating a synthetic key frame that includes each of the synthesized key regions from each section, Bruckhaus teaches, in column 6, lines 37-48, generating a representative image of the entire video that shows a representative image from each of the sections of the video. With regard to claim 28, further teaching each selected key region corresponding to a portion of a frame smaller than the total frame size, Bruckhaus teaches, in column 4, lines 35-65, a unit extractor that selects portions of frames representative of the section, where the selected unit is an element in a frame. With regard to claim 28, further teaching providing a user interface to a predetermined display to browse a video related to the generated synthetic key frame, Bruckhaus teaches, in column 6, lines 37-60, a user interface presenting the representative images for view. With regard to claim 28, further teaching selecting the synthetic key frame according to an input by a user, and reproducing a segment represented by the selected synthetic key frame, Bruckhaus teaches, in column 6, lines 37-60, a user interface that allows the user to browse the video content by representative frames. Bruckhaus further teaches, in column 7, line 14-21, allowing selection of a representative image to reproduce a video segment.

22. With regard to claim 29, which teaches a reproducing step that reproduces a segment related with constituent elements of the contents of the key frame, Bruckhaus further teaches, in column 7, line 14-21, allowing selection of a representative image to reproduce a video segment.

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23. With regard to claims 30, 32, 34, 36, 38, and 40, which teach the synthetic key frame including a selected key region from each of the plurality of sections, Bruckhaus teaches, in column 6, lines 37-48, generating a representative image of the entire video that shows a representative image from each of the sections of the video.

24. With regard to claims 31, 33, 35, 37, 39, and 41, which teach each of the plurality of sections comprising a video frame, and the selected key region comprises a portion of the video frame, Bruckhaus teaches, in column 1, lines 55-63 and in column 4, lines 12-25, a system that automatically generates a representative image to represent a video sequence of a video program, the system further dividing a video into sequences, from which it extracts units (representative images).

25. With regard to claim 45, which teaches that the synthetic key frame is a generated frame that is not provided in the received video stream, Bruckhaus teaches, in column 6, lines 37-48, that the representative display provides a composite image made up of representative images from the frames.

26. With regard to claim 46, which teaches transmitting the synthetic key frame from a server to a terminal, Bruckhaus teaches, in column 3, lines 34-64, implementation of the system over a network.

27. With regard to claim 47, which teaches the terminal comprising a mobile terminal, Bruckhaus teaches, in column 3, lines 34-64, implementation of the system via a computer system (desktop, laptop, etc.).

***Response to Arguments***

28. The arguments filed on 9-14-2005 have been fully considered but they are not persuasive. The reasons are set forth below.

29. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

30. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

31. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis G. Bonshock whose telephone number is (571)


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272-4047. The examiner can normally be reached on Monday - Friday, 6:30 a.m. - 4:00 p.m.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12-1-05  
dgb



**RAYMOND J. BAYERL**  
**PRIMARY EXAMINER**  
**ART UNIT 2173**